

Application No.: 09/892,543
Amendment Dated: October 30, 2003
Reply to Advisory Action of: October 22, 2003

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims

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1. (Previously Presented) A method for producing an ethylene-vinyl acetate copolymer, comprising:

copolymerizing ethylene and vinyl acetate in an alcohol-based solvent, so as to form a solution containing said ethylene-vinyl acetate copolymer; and

recovering unreacted vinyl acetate from said solution after copolymerizing;

wherein said solution is introduced into a recovery column through an upper portion thereof, a vapor of an alcohol-based solvent is introduced into said recovery column through a lower portion thereof, a solution comprising ethylene-vinyl acetate copolymer is taken out of said recovery column through a lower portion thereof, and unreacted vinyl acetate in the solution is taken out of said recovery column with the vapor of the alcohol-based solvent through an upper portion thereof;

wherein said alcohol-based solvent is deoxidized in advance and an oxygen concentration in said alcohol-based solvent is not more than 60 ppm when said alcohol-based solvent is used in recovering said unreacted vinyl acetate.

2. (Previously Presented) The method according to claim 1, wherein said oxygen concentration is not more than 30 ppm.

3. (Previously Presented) The method according to claim 1, wherein an oxygen

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concentration in said alcohol-based solvent for copolymerizing is not more than 15 ppm.

4. (Previously Presented) A method for producing a saponified ethylene-vinyl acetate copolymer, comprising:

copolymerizing ethylene and vinyl acetate in an alcohol-based solvent to obtain a solution containing an ethylene-vinyl acetate copolymer;

recovering unreacted vinyl acetate from said solution after copolymerizing; and

saponifying said ethylene-vinyl acetate copolymer;

wherein said solution is introduced into a recovery column through an upper portion thereof, a vapor of an alcohol-based solvent is introduced into said recovery column through a lower portion thereof, a solution comprising said ethylene-vinyl acetate copolymer is taken out of the recovery column through a lower portion thereof, and unreacted vinyl acetate in the solution is taken out of said recovery column with the vapor of the alcohol based solvent through an upper portion thereof,

wherein said alcohol-based solvent is deoxidized in advance and an oxygen concentration in said alcohol-based solvent is not more than 60 ppm when said alcohol-based solvent is used in recovering said unreacted vinyl acetate.

5. (Previously Presented) The method according to claim 4, wherein a saponification degree of said saponified ethylene-vinyl acetate copolymer is at least 90 mol %.

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6. (Previously Presented) The method according to claim 4, wherein said oxygen concentration is not more than 30 ppm.

7. (Previously Presented) The method according to claim 4, wherein an oxygen concentration in said alcohol-based solvent for copolymerizing is not more than 15 ppm.

8. (Previously Presented) The method according to claim 1, wherein said alcohol-based solvent is deoxidized in advance of said copolymerizing.

9. (Previously Presented) The method according to claim 4, wherein said alcohol-based solvent is deoxidized in advance of said copolymerizing.

10. (Previously Presented) The method according to claim 1, wherein said alcohol-based solvent is deoxidized in advance of said recovering.

11. (Previously Presented) The method according to claim 4, wherein said alcohol-based solvent is deoxidized in advance of said recovering.

12. (Previously Presented) The method according to claim 1, wherein said alcohol-based solvent comprises a member selected from the group consisting of an alcohols having 1 to 4 carbon atoms and mixtures thereof.

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CA 13. (Previously Presented) The method according to claim 4, wherein said alcohol-based solvent comprises a member selected from the group consisting of an alcohols having 1 to 4 carbon atoms and mixtures thereof.

14. (Previously Presented) The method according to claim 1, wherein said ethylene-vinyl acetate copolymer further comprises, in copolymerized form, a comonomer selected from the group consisting of α -olefins, unsaturated acids, salts of unsaturated acids, anhydrides of unsaturated acids, monoalkyl esters of unsaturated acids and dialkyl esters of unsaturated acids, ethylenically unsaturated nitriles, ethylenically unsaturated amides, olefin sulfonic acids, salts of olefin sulfonic acids, alkyl vinyl ethers, vinyl ketone, N-vinylpyrrolidone, vinyl chloride and vinylidene chloride.

15. (Previously Presented) The method according to claim 4, wherein said ethylene-vinyl acetate copolymer further comprises, in copolymerized form, a comonomer selected from the group consisting of α -olefins, unsaturated acids, salts of unsaturated acids, anhydrides of unsaturated acids, monoalkyl esters of unsaturated acids and dialkyl esters of unsaturated acids, ethylenically unsaturated nitriles, ethylenically unsaturated amides, olefin sulfonic acids, salts of olefin sulfonic acids, alkyl vinyl ethers, vinyl ketone, N-vinylpyrrolidone, vinyl chloride and vinylidene chloride.

16. (Previously Presented) The method according to claim 1, wherein an ethylene

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content of said ethylene-vinyl acetate copolymer is at least 20 mol% but not more than 70 mol%.


17. (Previously Presented) The method according to claim 4, wherein an ethylene content of said ethylene-vinyl acetate copolymer is at least 20 mol% but not more than 70 mol%.

18. (Previously Presented) The method according to claim 4, wherein a melt index of said saponified ethylene-vinyl acetate copolymer is from 0.1 to 200g/min, as measured at 190°C under a load of 2160g.

19. (Withdrawn) The method according to claim 4, further comprising:
mixing said saponified ethylene-vinyl acetate copolymer with a thermoplastic resin.

20. (New) A method for producing an ethylene-vinyl acetate copolymer, comprising:
copolymerizing ethylene and vinyl acetate in a first alcohol-based solvent, so as to form a solution containing said ethylene-vinyl acetate copolymer; and
recovering unreacted vinyl acetate from said solution after copolymerizing;
wherein said solution is introduced into a recovery column through an upper portion thereof, a vapor of a second alcohol-based solvent is introduced into said recovery column through a lower portion thereof, a solution comprising ethylene-vinyl acetate copolymer is

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 taken out of said recovery column through a lower portion thereof, and unreacted vinyl acetate in the solution is taken out of said recovery column with the vapor of the second alcohol-based solvent through an upper portion thereof;

wherein said second alcohol-based solvent is deoxidized in advance and an oxygen concentration in said second alcohol-based solvent is not more than 60 ppm.

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BASIS FOR THE AMENDMENT

New Claim 20 has been added as supported by Claim 1 and the Examples.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1-20 will now be active in this application. Claim 19 stands withdrawn from further consideration as being drawn to non-elected subject matter.